

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
28 July 2005 (28.07.2005)

PCT

(10) International Publication Number
WO 2005/069150 A1

(51) International Patent Classification⁷: **G06F 13/12**,
13/16, 11/20, G11B 11/00

(21) International Application Number:
PCT/SG2004/000020

(22) International Filing Date: 20 January 2004 (20.01.2004)

(25) Filing Language: English

(26) Publication Language: English

(71) Applicant (for all designated States except US): **TREK 2000 INTERNATIONAL LTD.** [SG/SG]; 30 Loyang Way, #07-13/14/15 Loyang Industrial Estate, Singapore 508769 (SG).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **TAN, Henry** [SG/SG]; 1 Palm Drive, Singapore 456458 (SG). **LIM, Lay, Chuan** [MY/SG]; Blk 322, Bukit Batok St. 33 #03-04, Singapore 650322 (SG). **POO, Teng, Pin** [MY/SG]; Blk 44 Bedok South Road #11-763, Singapore 460044 (SG).

(74) Agent: **WATKIN, Timothy, Lawrence, Harvey**; Lloyd Wise, Tanjong Pagar, P.O. Box 636, Singapore 910816 (SG).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

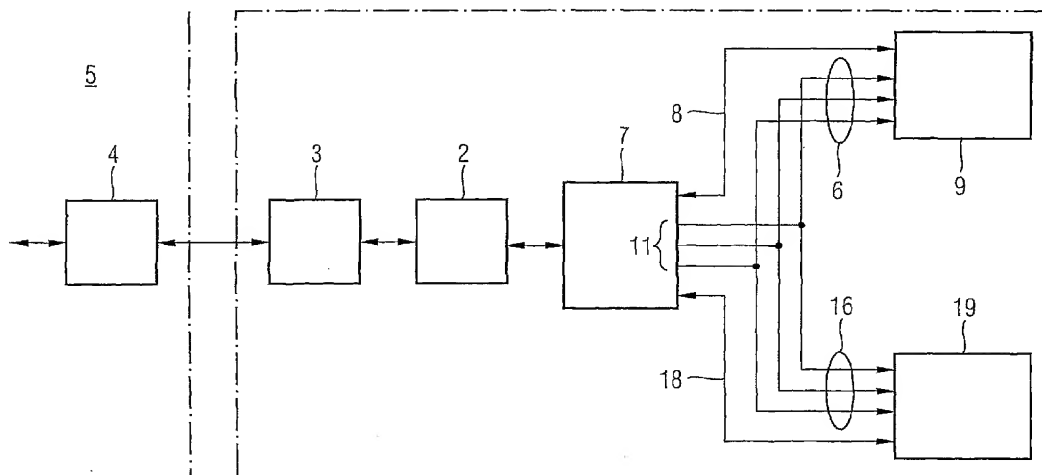
— of inventorship (Rule 4.17(iv)) for US only

Published:

— with international search report

[Continued on next page]

(54) Title: PORTABLE DATA STORAGE DEVICE USING MULTIPLE MEMORY DEVICES



(57) Abstract: A portable data storage device includes a USB interface (3), a USB controller (2), a master control unit (7), and two or more NAND flash memory devices (9, 19). The master control unit (7) can send data to the NAND flash memory devices (9, 19) simultaneously through parallel respective 8-bit buses. The master control unit (7) controls the operation of the memory devices (9, 19) by sending them identical control data through respective control signal lines (6, 16). When data is to be stored it is divided into portions which are sent to the respective memory devices (9, 19), and both memory devices are instructed to store data simultaneously. When data is to be retrieved both are instructed to write data back simultaneously to the MCU.

WO 2005/069150 A1



For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.